



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,439	12/31/2001	Gary M. Gunderson	11532-025001	4828

20985 7590 03/06/2003

FISH & RICHARDSON, PC
4350 LA JOLLA VILLAGE DRIVE
SUITE 500
SAN DIEGO, CA 92122

EXAMINER

PRITCHETT, JOSHUA L

ART UNIT PAPER NUMBER

2872

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/037,439

Applicant(s)

GUNDERSON, GARY M.

Examiner

Joshua L Pritchett

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Oath/Declaration

The examiner respectfully requests the applicant send another copy of the applicant's residence address, citizenship, and post office address information. The form entered in the application is a photocopy that is difficult to read and may lead to communication difficulties between the applicant and the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12-16 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a) The applicant claims "semi-hemispherical mounts" in claim 12, but the applicant only mentions "hemispherical mounts" in the specification (page 9, reference number 165). The claim has been examined as if the applicant claimed "hemispherical mounts."

b) The remaining claims are dependent upon the rejected base claim and thus inherit the deficiencies thereof.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-5, 10-11 and 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) The limitation “a semi-kinematic mount” is indefinite in claims 4 and 14 because it is unclear whether the applicant is referring to the same semi-kinematic mount from claims 1 and 12, respectively, or a new semi-kinematic mount. The claims have been examined as if the applicant were claiming “another semi-kinematic mount.”

b) The remaining claims are dependent upon the rejected base claims and thus inherit the deficiencies thereof.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-11 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Stewart (US 5,812,310).

Regarding claim 1, Stewart discloses an apparatus with a carrier plate (16) a first plurality of camming elements (66) each of the camming elements including a downwardly directed camming surface. Stewart further discloses a semi-kinematic mount (62) connecting the first plurality of camming elements to a surface of the carrier plate. Stewart further discloses a second plurality of camming elements (72), each of the camming elements including an upwardly directed camming surface slidably connected to a corresponding one of the downward directed camming surfaces (col. 4 lines 26-28). Stewart further discloses an actuator plate (70) coupled to the second plurality of camming elements such that the upwardly directed camming surfaces move in relation to the downward directed camming surfaces in response to the actuator plate moving along a first axis, such that movement of the actuator plate along the first axis translates into movement of the carrier plate along a second axis orthogonal to the first axis (col. 4 lines 39-41).

Regarding claim 2, Stewart discloses an actuator operative to move the actuator plate along the first axis (col. 4 lines 53-56).

Regarding claim 4, Stewart further discloses a base (30) and another semi-kinematic mount (84) connecting the plurality of camming elements to a surface of the base.

Regarding claim 5, Stewart discloses the actuator plate including a plurality of apertures adapted to accommodate the second plurality of camming elements (Fig. 2, 72). Stewart shows the camming elements being part of the actuator plate and the camming elements (72) having holes in them.

Regarding claim 6, Stewart discloses each of the downward directed camming surfaces is inclined at an angle of approximately 18.5 degrees from a plane of the surface of the carrier plate (col. 4 lines 16-18).

Regarding claim 7, Stewart discloses the first axis is either the X or Y-axis and the second axis is the Z-axis (col. 4 lines 29-41).

Regarding claim 8, Stewart discloses each of the actuator plate and the carrier plate including an optical aperture (86 and 96, respectively).

Regarding claim 9, Stewart further discloses a plurality of linear slides (20, 82), each of the linear slides interconnected between adjacent downwardly directed camming surfaces and upwardly directed camming surfaces (col. 4 lines 30-31).

Regarding claim 10, Stewart discloses the second plurality of camming elements are slidably mounted to the base (col. 4 lines 51-56).

Regarding claim 11, Stewart discloses a plurality of linear slides, each of the linear slides interconnected between one of the second plurality of camming elements and the surface of the base (col. 4 lines 47-49).

Regarding claim 17, Stewart discloses an X-axis frame operative to move along the X-axis, a Y-axis frame operative to move along the Y-axis, and a Z-axis frame operative to move along the Z-axis (col. 3 lines 15-17, lines 38-40). The other limitations of claim 17 are repeated from claim 1 and are rejected for the same reasons mentioned above.

Regarding claim 18, Stewart discloses the use of linear actuators for the X and Y-axis frames in their respective directions (col. 3 line 51). Stewart further discloses a plate (70) attached to the Z-axis frame (22) movable by a linear actuator (76); therefore the Z-axis frame is inherently movable by a linear actuator.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart in view of Kemeny (US 6,517,060).

Stewart teaches the invention as claimed but lacks reference to the use of ball-in-cone mounts. Kemeny teaches the use of ball-in-cone mounts (2690) to isolate the vibration along a specific axis (col. 9 lines 1-8). It would have been obvious to a person of ordinary skill in the art

at the time the invention was made to use the ball-in-cone mount taught by Kemeny as the Stewart mount for the purpose of isolating vibrations in the apparatus in order to attain a more precise and accurate image from the camming elements. One would have been motivated to look at the Kemeny reference because vibrations can cause serious problems in microscopy especially at high magnifications and the Kemeny reference has a teaching on a way to isolate the vibrations, which would reduce their effect on the data collected during microscopic observation.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

George (US 3652,146) teaches an adjustable microscope stage.

Spinali (US 6,400,516) teaches the use of hemispherical mounts in optics.

Moss (US 4,072,428) teaches a singular hemispherical mount.

Kasanuki (US 5,481,527) teaches a microscope with linear actuators for the X, Y and Z directions.

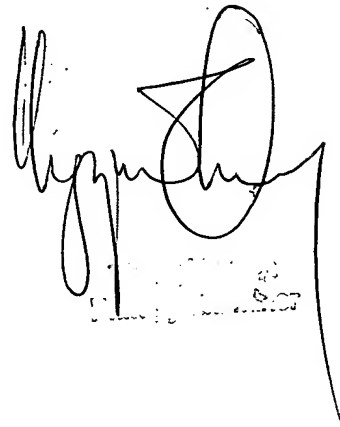
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L Pritchett whose telephone number is 703-305-7917. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

Art Unit: 2872

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JLP
March 4, 2003

A handwritten signature in black ink, appearing to be "JLP", with a large, stylized loop at the end of the signature.